



# AbbeyRoad | 50s Drummer

Manual



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# 1 Introduction

ABBEY ROAD 50S DRUMMER is an acoustic drum library featuring premium drum kits, world famous studio sound, full mixing control with high quality effects and a huge selection of MIDI grooves covering a variety of popular music genres: everything you need to create perfect drum tracks for all kinds of productions.

Two **beautiful and historic kits** were chosen for the ABBEY ROAD 50S DRUMMER project. Just about every articulation possible was played on each of the drums and cymbals and recorded at up to 25 velocity layers, with up to six variations per velocity hit. Up to 15 microphones were used on each kit, including many direct mics, a mono overhead, a stereo overhead pair, and mono and stereo room mics (to capture the ambient sound of the recording space), with each microphone able to be mixed separately in the software.

The drums were all recorded at Abbey Road Studios, the world's first ever purpose build recording studios. Opened on 12th November 1931, the studios have been at the heart of the UK music industry for more than 80 years and have been the location of countless landmark recordings and pioneering developments in recording technology. Today, Abbey Road Studios is one of the most technically advanced recording, mixing and post-production complexes in the world. For many years, Abbey Road benefited from the talents of EMI's research and development division, which custom-built mixing consoles, microphones and outboard gear to meet the demands and ambitions of the studio engineers and the artists they worked with. Most of this equipment was only available to EMI studios and was never sold commercially. This equipment, combined with the expertise of the engineers and the unique acoustic properties of the studios, engendered what has come to be known as the 'Abbey Road Sound' which can be heard on some of the most popular recordings of all time.

Abbey Road and Native Instruments joined forces in 2009 to create outstanding musical instruments based on Abbey Road's legendary equipment, engineering expertise and studio acoustics. Combined with the development and design expertise of Native Instruments, musicians can experience a new level of versatility and musicality.

## Document Conventions

This document uses particular formatting to point out special facts and to warn you of potential issues. The icons introducing the following notes let you see what kind of information can be expected:



Whenever this exclamation mark icon appears, you should read the corresponding note carefully and follow the instructions and hints given there if applicable.



This light bulb icon indicates that a note contains useful extra information. This information may often help you to solve a task more efficiently, but does not necessarily apply to the setup or operating system you are using; however, it's always worth a look.

Furthermore, the following formatting is used:

- Text appearing in (drop-down) menus (such as *Open...*, *Save as...* etc.) and paths to locations on your hard drive or other storage devices is printed in *italics*.
  - Text appearing elsewhere on the screen (labels of buttons, controls, text next to checkboxes etc.) is printed in **light blue**. Whenever you see this formatting applied, you will find the same text appearing on the screen.
  - Important names and concepts are printed in **bold**.
  - References to keys on your computer's keyboard you'll find put in square brackets (e.g., "Press [Shift] + [Return]").
- Single instructions are introduced by this play button type arrow.
- Results of actions are introduced by this smaller arrow.

## About KONTAKT / KONTAKT PLAYER

ABBEY ROAD 50S DRUMMER is a KONTAKT Instrument; you will, therefore, have to have KONTAKT or the free KONTAKT PLAYER installed on your computer in order to use this instrument. Refer to the KONTAKT / KONTAKT PLAYER documentation to learn how to load and configure KONTAKT Instruments.

## 2 About ABBEY ROAD 50S DRUMMER

### 2.1 The Studio



Abbey Road's Studio Two

Studio Two, arguably the most famous recording studio in the world, has a unique design, a peerless acoustic and an unparalleled history of recording. The thick solid wooden parquet floor, irregularly laid painted brick walls, hanging acoustic 'cabot's quilt' drapes, bass traps and a false dropped ceiling give Studio Two a sound like no other. The studio is so fantastic at handling any style of music, from rock and roll sessions through to mid-sized orchestras, that it has remained more or less unchanged since the early 1960s.

Artists who have recorded in Studio Two include Pink Floyd, Kate Bush, The Beatles, Nick Cave and the Bad Seeds, Cliff Richard and the Shadows, Green Day, Groove Armada, Idlewild, Muse, Oasis, Underworld, U2, Radiohead and Kanye West along with a wealth of film scores.





A 50's kit in Studio 2

Studio Statistics

Dimensions	
Height	24ft / 7.31m
Width	38ft 3in / 11.65m
Length	60ft 2in / 18.35m
Floor Area	2131sq ft / 198sq m
Reverberation Time	1.2 sec

2.2 The Team

ABBEY ROAD 50S DRUMMER was recorded by Chris Bolster and executively produced by Mirek Stiles. Drumming duties were performed by Paul Clarvis.

**Mirek Stiles** joined Abbey Road Studios in 1997 and has worked as an engineer on a multitude of pop/rock sessions as well as many different film scores. Projects include: Fiona Apple, Jon Brion, The Beatles: Yellow Submarine Songtrack, The Beatles Anthology 5.1 Remix, The Beatles Love, Nick Cave and the Bad Seeds, Mick Jagger, John Lennon back catalogue remix albums, Muse, Paul McCartney, Dave Stewart, Kanye West and The Lord of the Rings trilogy.

**Chris Bolster** joined Abbey Road Studios in 1998, after leaving his homeland of New Zealand. He had already enjoyed three years at Auckland based York Street Studios, working with a host of the country's top local talent. Since joining Abbey Road, Chris has worked on a rich and diverse range of projects with many different producers, engineers and artists including: Oasis, Star Sailor, The Beatles, Jon Brion, Texas, Stereophonics, Lamb, The Divine Comedy, Kate Bush, Paul McCartney, Maroon 5 and many episodes of the TV series Live from Abbey Road.

**Paul Clarvis** is renowned for his ability to bring his unique playing style to a wide range of genres. As one of London's most requested musicians, Paul can be heard on recordings by Mick Jagger, Elvis Costello, Elton John, Paul McCartney, Annie Lennox, Sting, Bryan Ferry, McFly, The Orb, Michael Nyman, Maurice Jarre and John Williams. Paul is not only a highly sought-after musician, but also an avid collector of rare and vintage drum kits, cymbals, snare drums and percussion. Paul was kind enough to offer some of the finest parts of his personal instrument collection for use on the ABBEY ROAD 50S DRUMMER sessions.

## 2.3 The Kits

Two very special drum kits from the 1950s were chosen for the ABBEY ROAD 50S DRUMMER project. In contrast to modern drum kits where the wood used is young and grown specifically for the purpose, the timber used to make these vintage drums has matured over many years, giving an unparalleled tonal quality. In much the same way that a concert violinist would use an instrument that is at least 60 or 70 years of age, discerning drummers are attracted to these rare vintage drums for their beautiful and unique tone. These instruments have defined recording history and shaped popular culture and are now almost sacrosanct in the drumming world.

These instruments will provide a unique package, reminiscent of early Doo Wop and R&B records that have been sampled time and time again by engineers and producers. The sounds will also be of interest to anyone looking for something a little different, from film scores and rock right through to electronica and urban styles. Such a comprehensive collection of rare instruments is hard to come by and some have not been available to the general public before.

A note on the overall kit sound—due to technical advances and typical recording spaces, the drums from this era were generally starting to cut through the mix a little more than in the 1940s. The sound tended to come across as more defined and punchy than the swing and big band sounds of the previous decade. To help achieve this effect, carpet and screens were used in Studio Two. This created a vastly different recording space to the one used for the previous

Abbey Road Drummer series, paying homage to the huge curtain used in the early decades of Studio Two that would literally halve the size of the room (long since removed). The resulting sound is more intimate and upfront. ABBEY ROAD 50S DRUMMER also has the ability to blend in distant ambient microphones, so users can still create the classic huge Studio Two drum sound if desired.

The two original 1950s kits chosen for this project are:

### **2.3.1     Gretsch Cadillac Green Nitron Kit with Calf Skin Heads**



The Gretsch Cadillac Green Nitron Kit with Calf Skin Heads

This kit has a thick, full and chunky sound.

- 2" Tom
- 14" Floor Tom
- 20" Kick Drum

Over the years very few of these drums have survived, meaning that this could very well be the most desirable and rarest of all the Gretsch kits ever made. There was a limited run of different nitron finishes for only a few years; Cadillac nitron green is the most highly sought-after and is the only color that comes with gold-plated hardware.

### 2.3.2 WFL Kit



The WFL Kit

This kit has a clean and open sound, which is far less complex than the Gretsch.

- 12" Tom
- 13" Tom
- 14" Floor Tom
- 20" Kick Drum

Ludwig had been making drum products since the early 1900s. For a brief period, after an acquisition of the Ludwig company, founder William F. Ludwig broke away to manufacture his own line of drums named WFL between 1937 and 1955, before gaining control of the Ludwig name again. This kit is a rare example of WFL from the 1950s.

## Snare Drums:

**Gretsch BroadKaster** 6.5 x 14 - 1950s. Originally marketed as a super sensitive separate tension orchestral snare drum, this was used by Shelly Manne, Louie Bellson and many other high-profile artists who liked its sharper tone and faster action.

**Gretsch 'Max Roach'** 14 x 4 – 1950s. This is a narrower model than the Broadkaster and was designed for the legendary Max Roach to give a crisper and faster response.

**Leedy Professional** 14 x 5 - 1920s. An extremely rare piece of kit, this solid maple snare drum is from the Leedy Professional range, manufactured between 1925 and 1929.

**Gladstone** 14x 6.5 - 1950s. This Billy Gladstone snare drum is one of only fifty ever made and is considered the Holy Grail amongst the vintage drum collecting community. Billy was considered a master craftsman. Each snare drum was built to perfection and included a unique three way tuning system, minimal hardware and multi-positional internal mufflers—all of these features were game changers in the 1950s. This is a very rare snare drum indeed.

**WFL** 14 x 8 - 1950s. This mahogany snare drum from the 1950s has a huge heavy sound due to the 8” depth of the shell. This is another fantastic and rare example of the WFL range.

**WFL** 13 x 3 - 1950s. In the late 1940s, WFL signed Buddy Rich as their endorser to compete with the Slingerland/Gene Krupa range. By 1949, the Buddy Rich ‘Bebop’ snare drum became available.

## Cymbals

A selection of hand hammered **A & K Zildjian cymbals** from the 1950s.

By the early 1960s, Zildjian stopped hand hammering their cymbals and switched to machine hammer, resulting in a different sound and appearance. This was mainly to keep up with demand after the huge rise in pop music in the 60s. The collection used for ABBEY ROAD 50S DRUMMER is the last example of completely unique cymbals produced in that decade.

## Percussion

A selection of period percussion instruments from the Paul Clarvis collection was also used on these sessions, including spoons, tambourines, woodblocks, shakers and cowbells.

## 2.4 The Recording Equipment

By the 1950s, recording started to evolve rapidly. Tape machines and fully fledged mixing consoles with EQ on each channel arrived, along with the ability to mix increasing numbers of microphone sources. This resulted in clearer, more focused recordings than those from previous decades. EMI and Abbey Road Studios were at the forefront of this recording transformation, and for many years built their own equipment from a large research and manufacturing facility in Hayes (just outside London). The BTR (British Tape Recorder) is one such piece of equipment. Made of iron and steel, the BTR was a brute of a machine, weighing in at almost 600 pounds. These machines were used all over the Abbey Road building from 1948 onwards. Initially, they worked simultaneously with the older disc-cutting equipment, which was the studios' only recording method before the advent of tape. It was quite a success, with hundreds of units being built and used worldwide by EMI studios and the BBC. It was the workhorse machine for most Abbey Road recordings from the 1950s and '60s. Unfortunately Abbey Road no longer owns a working BTR, but for this project a similar valve tape machine from the early 60s was used with original EMI tape from the decade.

Another major development was the REDD.17 recording console (REDD stands for Recording Engineering Development Department). This all-valve console first made an appearance at Abbey Road in 1957 and is still used at the studios today for special sessions. The console was the first to look and feel like the modern consoles we know today and was very powerful for its time, due to the individual treble and bass EQ on each channel. The REDD desks were both sleek and robust, designed to be used as either portable or permanent installations. Only four REDD.17 consoles were manufactured before the more powerful REDD.37/51s made an appearance.



The REDD.17 recording console

Vintage microphones are extremely valuable and prized by any studio. Abbey Road's unique collection comprises a large number of originals, spanning many decades. It is a working collection, and the microphones used on recording sessions today are often the very ones used by legendary artists throughout the studios' long history.

### **Vintage Channels**

Period microphones via the REDD.17 and tape machine:

### **Mono Overhead and Mono Room**

**RCA 44-BX** – This figure of 8 ribbon microphone was introduced in 1931 and remains a popular choice among Abbey Road engineers to this day. As with any ribbon microphone, the proximity effect will exaggerate bass sounds the closer the microphone is moved to the source. This was often seen as an advantage to make sounds appear bigger and fuller.

### **Kick Out**

**AKG D12** - Introduced in 1953, the AKG D12 was one of the world's first dynamic cardioid microphones, designed to reduce the pick-up of extraneous sounds. The large diaphragm, cardioid pattern and the transducer's special 'bass chamber' that boosts the lower frequencies in the 60-120 Hz range make it a very popular choice for bass drums and bass guitars.



The channels below are more traditional recording techniques used at Abbey Road Studios to supplement the vintage channels.

### **Kick In**

**Neumann U 47 fet** (also called FET47) – Production of the tube-based U47 microphone came to an end in 1965, largely due to the fact the VF14 tube used inside the microphone was no longer being manufactured. The FET47 was released to the world in the late '60s and was intended as a replacement to the U 47. Although it is generally accepted as sounding very different to the U 47, the FET47 has a character all of its own and is still in great demand. The microphone contains no less than 7 transistors, one of these being FET based. The FET47 is still a firm favorite at Abbey Road for many applications including kick drum.

### **Kick Sub**

**Yamaha NS10** – The Yamaha NS10 is in fact a monitor loudspeaker introduced in 1978 for domestic use. It quickly found its way into studios as a 'real world' reference monitor. Although they are no longer in production, NS10s can still be found in most professional recording studios around the world. Another popular use for the NS10 is to take the white bass cone out of the monitor enclosure and wire it up as a microphone. Suspended in front of a kick drum, the large surface area of the diaphragm is great for picking up sub bass frequencies while rejecting high frequencies. This natural mechanical filtering results in a pleasing sub-frequency kick drum sound.

### **Hi-hat**

**Neumann KM 56** – This microphone was introduced to the world in 1956 and is still a popular choice at Abbey Road. A selection of three polar patterns makes it an extremely versatile valve condenser microphone.

### **Snare Top**

**Neumann KM 84** and **Shure SM57** – Introduced in 1967, the SM57 is still one of the world's biggest selling microphones. A dynamic cardioid microphone with a rugged construction, it was used to provide the 'body' of the snare drum with the KM84 providing the 'top end.'



## Snare Bottom

**Neumann KM 84** – The KM 84 microphone is a small capsule cardioid condenser and one of the world's first microphones made with 48v phantom power technology. In the mid-60s microphone design was starting to replace valves with transistors, with results like the KM 84 and FET series microphones. The KM is German for 'Kleines Mikrofon' (small microphone). Very popular at Abbey Road in the 70s for drums in general, the microphone is still used on a daily basis in the studios.

## Toms

All rack and floor toms for this project were mic'ed from the top and from below. The signals were then mixed together to create a single tom channel (the phase of the bottom signal reversed by 180 degrees). The idea behind this is that the top microphone provides the attack, while the bottom microphone provides the resonance of the shell. This technique can make a massive difference to the overall tom tone of a recording.

## Tom Top

**Neumann KM 56** – This microphone was introduced to the world in 1956 and is still a popular choice at Abbey Road. A selection of three polar patterns makes it an extremely versatile valve condenser microphone.

## Tom Bottom

### AKG D12

For details, see above.

## Stereo Overhead

### Neumann KM 56

For details, see above.

## **Stereo Room**

**Neumann M 50** – The classic Neumann M 50 was first introduced to the world in 1952. The valve omni-directional M 50 was always considered an orchestral microphone at Abbey Road during the 60s. It is still used at Abbey Road on practically every orchestral session that takes place and is perfect for capturing the ambience of a room, be that a string section or a drum kit.

## 3 Quickstart

In this chapter, you will find a quick guide to navigating the controls of ABBEY ROAD 50S DRUMMER, as well as step by step guides to certain functions.

### 3.1 Basic Navigation

The interface has four main pages of control. You can navigate among these pages by clicking on the tabs at the bottom of the instrument's Performance View. The different pages and their uses are as follows:

- **Grooves page:** On this page is a browser of many genre-separated MIDI grooves and fills with variations that can be dragged to your host for immediate song creation.
- **Options page:** This page has options for technical kit settings such as kit mapping and velocity options, as well as randomization parameters.
- **Kit page:** You can select each drum on this page to adjust the overhead and room mixes, tuning, and volume envelopes for those drums. You can also select which snare you want to use, as well as load and unload the separate kit pieces.
- **Mixer page:** This page has all of the standard controls for an audio mixer, including levels, panning, solo, mute, send levels and channel routing. This is also where all effect settings and effect routing options are edited.



The four navigation tabs at the bottom of the Performance View

### 3.2 Editing the Drums

#### 3.2.1 Fine-Controlling Individual Drums and Articulations

To change the individual kit piece's sound settings and articulations:

1. Click on the [Kit](#) tab.

2. To edit the settings for a particular drum or cymbal, just click on its picture. Percussion is selected from a sub-menu of icons next to the drum kit image.
3. To change the overhead and room mix amounts for each piece, adjust the corresponding **OH MIX** and **ROOM MIX** knobs.
4. To alter the tuning, adjust the **TUNE** knob.
5. To change the volume envelope of the selected piece, you can adjust the **ATTACK**, **HOLD** and **DECAY** with the respective knobs.



A typical drum's control panel

### 3.2.2 Changing the Snare Drum

Each kit has alternate snares to choose from. To change the snare:

1. Click on the **Kit** tab.
2. Click on the snare drum image.



- Click on the **A**, **B**, or **C** button to select the snare you want to use.



→ The graphical representation of the snare drum will change to indicate the newly selected snare.

### 3.2.3 Creating a Mix

To create a mix of the kit, click on the **Mixer** tab. This will give you a virtual mixing console with many of the same controls you would find on a real mixing desk. Here you can control the volume, pan, mute, solo, and routing of the various tracks. You can also add many customizable effects to all channels.



A typical channel on the Mixer page

You can also adjust the levels of the in, out mics on the kick, the top and bottom mic on the snare, and the amount of snare mic bleed when the kick and toms play.



Additional controls for the Kick and Snare channels

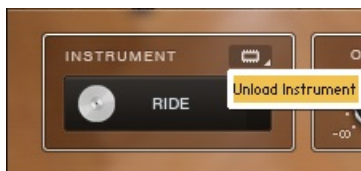
### 3.2.4 Adding and Removing Drums

If you will not be using a particular drum, cymbal or percussion instrument, you can remove it from the kit, thus freeing up more computer memory. To do this:

1. Click on the [Kit](#) tab.
2. Select the instrument that you want to remove.
3. Click on the small memory chip icon above the instrument name at the bottom left of the page.
4. A drop-down menu will appear, giving you the option to add or remove the instrument from the kit with *Load Instrument* and *Unload Instrument* options. When an instrument is unloaded, a darkened version of it will replace the original image.



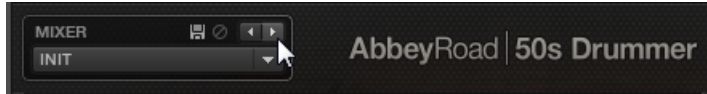
If you unload an instrument, you can always load it back again using the same method.



Unloading an instrument on the Kit page.


### 3.2.5 Preset Handling

- ▶ To step through the presets, simply click on the right and left arrows.



- ▶ To load a preset, simply select the preset from the drop-down menu.

### Saving User Presets

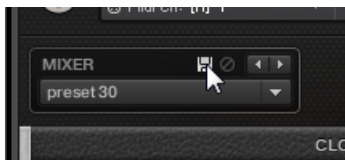
You can save presets for the settings of the whole mixer on the Mixer page, as well as kit mapping layouts on the Options page. Each of these preset menus contains a selection of factory presets and allows you to save your own custom presets. Factory presets cannot be overwritten (indicated by the darkened  icon), but they can be adjusted and saved as a new user preset.

To save a user preset:

1. Adjust the settings you want to save and recall for your preset.
2. Click in the text area on the preset drop-down menu.



3. Type in the name for the new preset and click on the Save icon above the drop-down menu.



- The new preset will now appear at the bottom of the drop-down menu and is ready to be used when opening the kit again.




If you save a user preset without changing the name, it will overwrite the current user preset.



There are 30 slots available for saving user presets. Once you have filled all 30 slots, you must delete a user preset in order to save a new one.

## Removing User Presets

To remove a user preset:

1. Select the preset in the drop-down menu.
2. Click on the  icon above the drop-down menu.

- The user preset will be deleted and not be available when opening the kit again.



## 4 The Performance View

This chapter describes the Performance View interface of ABBEY ROAD 50S DRUMMER. Learn how to use the functions and controls of the four pages: [Kit](#), [Mixer](#), [Grooves](#) and [Options](#).

### 4.1 Kit Page

The [Kit](#) page has a view of the drum kit where you can select each drum and adjust:

- the tuning
- the volume envelope
- the overhead microphone mix
- the room microphone mix

You can also choose which snare you want to use, as well as load or unload the selected drum.



Kit page Performance View of the Spring Kit

To select a drum or cymbal for editing, click on it with the mouse. To select a percussion instrument, click on its icon at the right of the drum kit image. For details on editing the instrument settings on the [Kit](#) page, see section [↑3.2, Editing the Drums](#).



Clicking on an instrument will also play the sound of that instrument, giving you a quick preview of the sound. For instructions on how to disable (or enable) sound playback on mouse click, see section [↑4.4.3, KIT VIEW Settings](#).

After selecting an instrument, its name and controls will appear in the panel at the bottom of the page. Editing the sound of a selected instrument will edit all articulations of that instrument.

Each kit has two snare drums to choose from. You can select the snare drum you want to use by clicking on the **A** and **B** buttons below the snare image. Switching between the snares will unload the current snare from memory and load the other one, and will change the image of the snare drum.

When the **SELECT BY MIDI** icon at the upper right of the Kit page is activated, the drums will be selected depending on the notes played with your MIDI input device.



This function is automatically turned off during host playback, or while the file player of the KONTAKT stand-alone application is running (e.g. playing back a MIDI groove).



You can also select the kit pieces by using the **INSTRUMENT** drop-down menu at the left of the panel at the bottom.

You can remove the selected instrument from the kit (and thus unload it from memory) by clicking on the small memory chip icon to the right of the **INSTRUMENT** header, as described in section [↑3.2.4, Adding and Removing Drums](#). Removing unused kit pieces is useful for freeing up computer memory. You can always load the kit pieces back at any time. When a kit piece is unloaded, its image turns dark.

The rest of the panel contains the controls for the Overhead (OH) and Room microphone mixes, the drum Tuning control, and the volume envelope of the drum with controls for the Attack, Hold, and Decay (AHD envelope). For more information on these controls, see sections [↑4.1.1, OH and ROOM MIX Knobs](#), [↑4.1.2, TUNE Knob](#), and [↑4.1.3, ATTACK, HOLD and DECAY Knobs](#).

### 4.1.1 OH and ROOM MIX Knobs



OH MIX and ROOM MIX knobs

The **OH MIX** and **ROOM MIX** knobs adjust the volume levels of the Overhead microphone(s) and the Room microphone(s) of the selected drum, cymbal, or percussion instrument. This allows you to create your own custom mix of those microphones for each individual drum, which is not possible in a traditional studio recording.



Please note that this is a separate control from the overall level of the OH and Room mics. These levels can be adjusted on the [Mixer](#) page.

### 4.1.2 TUNE Knob



TUNE knob

The **TUNE** knob changes the pitch of the selected kit piece. The pitch changes for all microphones and all articulations of that piece. The range of the **TUNE** knob is limited to values that are relatively realistic.

### 4.1.3 ATTACK, HOLD and DECAY Knobs



ATTACK, HOLD and DECAY knobs

The **ATTACK**, **HOLD** and **DECAY** knobs are controls for a typical AHD volume envelope for each selected drum.

- Increasing the **ATTACK** value adds more of a fade-in to the beginning of the sound.
- The **HOLD** knob adjusts how long the sound stays at maximum volume.
- The **DECAY** knob adjusts how quickly the sound fades out after the **HOLD** time has passed.

For the most natural drum sound, the default setting is the best (**ATTACK** is off, and **HOLD** is at maximum). Adjusting these controls is only necessary if you want to shape the sound in an “unnatural” way.

## 4.2 Mixer Page

The **Mixer** page has the same microphone level and panning controls as a real mixing board, as well as a large selection of effects and routing controls. You can save and load all mixer settings by using the **MIXER** panel at the upper left of the page. This panel appears on every page of ABBEY ROAD 50S DRUMMER, in order to select different mixer page presets while using other parts of the interface.



As each kit has a very different sound, mixer presets can only be used for the kit that they are saved with.



Mixer page Performance View

### 4.2.1 Common Mixer Controls

- The channel faders on the [Mixer](#) page control the **volume level of the various microphones**. The faders in the [CLOSE MICS](#) area control the volume of the individual direct microphones, and the [KIT MICS](#) faders control the volume of the overhead and room microphones.



The levels of each instrument within the overhead and room microphones can be adjusted separately, but this is done on the Kit page (see section [↑4.1, Kit Page](#) above).

- Each close mic and mono kit mic has a **PAN** knob to change the left and right location of that mic in the stereo field.
- Each stereo kit mic has a **WIDTH** knob, ranging from **MONO** to **STEREO**. **STEREO** is the standard setting, where the left and right channels are independent on the left and right sides. As the knob is turned towards **MONO**, the left and right channels are combined until they become a single central sound source when the knob is turned all the way to the left.
- The **S** and **M** buttons allow you to solo (**S**) and mute (**M**) the individual channels. When a track has the Solo button pressed, all other channels are silent and only the soloed channel can be heard. Putting additional channels into solo mode will add those channels into the mix, but still keep all other channels silent. When the mute button is pressed, the selected track can no longer be heard. Mute has a higher “ranking” than solo, so if a track has both buttons pressed, the track will be muted.
- The **SEND** knob at the top of each channel controls the amount of reverb effect to be included in the mix for that channel. The global reverb level is adjusted with the reverb fader in the **BUSES** area.

### 4.2.2 CLOSE MICS Area

The **CLOSE MICS** area takes up the left portion of the **Mixer** page. As the name suggests, this area contains the **channel controls for the close microphones**. The close microphones (also known as “direct” mics) are placed very close to the drums. There are close microphones for the kick, snare, hi-hat, toms, and some percussion.

### 4.2.3 KIT MICS/BUSES Area

The right portion of the **Mixer** page displays the controls for either the kit microphones or the busses:

The **Kit Microphones view** includes controls for the overhead and room microphones. These microphones are placed in such a way to record the sound of the entire kit, either with a stereo pair or with a single mono microphone.

The controls in the **Buses view** are used to adjust the levels of the master output, master panning and reverb return level.

- ▶ To switch between the Kit Microphones and Buses view, click on the **BUSES** or **KIT MICS** button, respectively, both of which are located at the top-right of the **Mixer** page.
- ▶ You can also switch the left and right position of the master out with the **L↔R** button on the **MASTER** channel. All channels are labeled at the bottom, and the labels are highlighted when editing the channels.

## 4.2.4 Effects

Several new high quality effects are included with ABBEY ROAD 50S DRUMMER, specifically tailored for acoustic drum production. These effects are **Convolution Reverb**, **Solid G-EQ**, **Solid Bus Comp**, **Tape Saturation**, and the **Transient Master**. Each of these effects can be turned on or off for any of the channels by clicking on the LED next to each effect name at the bottom of the page.

### Convolution Reverb



Convolution Reverb effect

The Convolution Reverb includes many impulse samples of some of the best acoustic spaces for acoustic drum production.

- ▶ To **select an acoustic space**, click the **BUSES** button and then click on the **REVERB** tab. The various spaces will then appear at the bottom of the screen.
- ▶ To **shift the selection over to reveal more room types**, click on the room images to the right and left of the selected image.



- ▶ To **select the room type**, click on the drop-down menu above the selected room image. The drop-down menu below the room image allows you to select a specific room preset within that room type.
- ▶ To **adjust the overall level of the reverb**, move the fader on the Reverb channel. The amount of reverb in each channel is adjusted with the **SEND** knobs at the top of each microphone channel.

## Solid G-EQ



Solid G-EQ effect

The SOLID G-EQ is a uniquely musical EQ. Up to four frequency ranges can be adjusted with high precision.

- The **HZ/KHZ** knobs set the center frequency that is being adjusted with the EQ.
- For the two mid frequency ranges, there are **Q** knobs to adjust the width of the bell curve for the adjusted frequency range.
- The **DB** knobs adjust the gain boost or gain reduction of the selected frequencies.
- The low and the high frequencies can switch between bell curve and shelf modes by clicking on the **BELL** button.
- The **OUTPUT** knob on the right side adjusts the overall output level.

## Solid Bus Comp



Solid B-Compression effect

Also available as a fully-fledged product in its own right, this virtual reproduction of a legendary compressor adds presence and drive to your drums without blurring the detail.

- The **ATTACK** knob adjusts the amount of time in milliseconds that it takes for the compressor to reach the ratio after the input signal exceeds the threshold level.
- The **RELEASE** knob adjusts the amount of time in milliseconds that the compressor will take to stop affecting the sound after the input signal falls below the threshold.
- The **THRESHOLD** knob adjusts the level in dB that the input signal must exceed before the compressor starts affecting the sound.
- The **RATIO** knob controls the amount of compression expressed as a ratio of “input level” to “output level change”. The higher the **RATIO** knob is set, the more the output level will be reduced as the sound goes beyond the threshold.
- The **MIX** knob allows you to add the dry signal to the mix as well, for a parallel compression sound.
- The **MAKEUP** knob allows you to increase the overall output level of the compressed sound.
- The **OUTPUT** knob on the right side adjusts the overall output level.

## Tape Saturator



Tape Saturator effect

The Tape Saturator adds the simulated warmth of sound that comes from an analog tape machine.

- The **WARMTH** knob manipulates the frequencies of the audio to give a “warming” tone to the sound.
- The **GAIN** knob adjusts the amount that the input signal is boosted with the saturated sound.
- The **HF** knob takes away the highest frequencies in a similar way that analog tape rolls off those high frequencies.
- The **OUTPUT** knob on the right side adjusts the overall output level.

## Transient Master



Transient Master effect

The Transient Master can subtly or drastically change the sound of the drums, depending on how you want to use it.

- The **INPUT** knob adjusts the level of the input signal going into the effect.

- The **ATTACK** knob adjusts the level of the attack of the signal.
- The **SUSTAIN** knob adjusts how long the sound will ring out, which can effectively sound like changing the dampening or the size of the various drums, or even changing the size of the room that the drums are in.
- The **OUTPUT** knob on the right side adjusts the overall output level.

## 4.2.5 Channel Settings

Each channel has its own settings for effect routing and channel output routing, and each mic channel can also be unloaded from memory if not in use.



Channel Settings view for the Kick Drum

- In the **FX ROUTING** area, there are four different effect routing presets to choose from. These change the order of which effect comes before the other, depending on your preference in a mix (for example, some engineers prefer to use EQ before compression, while others prefer to use it after compression). The signal chain of the effects goes from left to right according to the image, and you can step through the different order presets using the right and left arrows.
- The **CHANNEL** area gives an **OUTPUT** drop-down menu to select which output that channel will be routed to. Please note that the channel outputs must first be setup in KON-TAKT before being able to route them here. To unload a channel that is currently not in use from your computer's memory, select it from the drop-down menu (represented by a memory chip icon) in the top-right corner of the **CHANNEL** area. You can always load that channel back at any time.

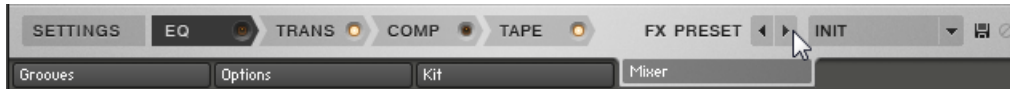
## Additional Kick and Snare Controls

The **Kick** and **Snare** close microphones have additional controls to adjust multiple direct microphone levels:

- For the **Kick** close mic, there is an additional area on the left where you can adjust the separate levels of the Direct In mic (placed inside the kick drum pointing towards the front head) and the Direct Out mic (placed a short distance outside of the kick drum).
- For the **Snare** close mic, there is an additional area on the left where you can adjust the separate levels of the Direct Top mic (placed over the snare drum pointing down), the Direct Bottom mic (placed under the snare drum pointing up), and the Snare Bleed. The Snare Bleed fader adjusts the amount of the “buzzing” sound that the bottom of a snare produces when resonated by the Kick and Toms.


### 4.2.6 FX Preset Handling

- To step through the presets, simply click on the right and left arrows.



- To load a preset, simply select the preset from the drop-down menu.

## Saving User Presets

You can save presets for the settings of the whole mixer on the Mixer page, as well as kit mapping layouts on the Options page. Each of these preset menus contains a selection of factory presets and allows you to save your own custom presets. Factory presets cannot be overwritten (indicated by the darkened  icon), but they can be adjusted and saved as a new user preset.

To save a user preset:

1. Adjust the settings you want to save and recall for your preset.

2. Click in the text area on the preset drop-down menu.



3. Type in the name for the new preset and click on the Save icon next to the drop-down menu.



- The new preset will now appear at the bottom of the drop-down menu and is ready to be used when opening the kit again.




If you save a user preset without changing the name, it will overwrite the current user preset.



There are 30 slots available for saving user presets. Once you have filled all 30 slots, you must delete a user preset in order to save a new one.

## Removing User Presets

To remove a user preset:

1. Select the preset in the drop-down menu.
2. Click on the  icon next to the drop-down menu.

- The user preset will be deleted and not be available when opening the kit again.

## 4.3 Grooves Page

The **Grooves** page is a browser with a huge library of organized MIDI grooves that can be used to quickly create drum parts for a song or production. You can edit several parameters to change the beats, and all grooves can be dragged into your host.

The **GROOVE** panel at the top right of the page allows you to play the groove with the play button, and select through the variations of that groove with the right and left arrow buttons. This panel is available on every page of ABBEY ROAD 50S DRUMMER so you can play the grooves when using any of the other pages.

- To use a groove in your host, click in the area of the groove name and drag the groove to your track in the host. A MIDI file of the groove will be created in your track.



Grooves page Performance View

The **GROOVE BROWSER** has a total of three columns:

- The leftmost column shows a list of Genre folders, each with its own set of customized Grooves, Fills and Variations.



- The middle column shows the list of Grooves and Fills available for that Genre. The standard time signature is 4/4, unless otherwise shown in the name of the Groove or Fill. And the end of each Groove, there is a suggested BPM (beats per minute) tempo to use, but the grooves can be used at any tempo.
- The rightmost column is a list of all Variations for the selected Groove or Fill. To select a Variation, double click on the variation name. After selecting one variation, you can use the up and down arrows on your computer keyboard to select among the variations, or the right and left arrows in the **GROOVE** panel.

## Available Grooves

The **7 Genres included with ABBEY ROAD 50S DRUMMER** are:

- *Rock'n'Roll*
- *Blues*
- *Traditional Pop*
- *Country*
- *Jazz*
- *Soul – Funk*
- *Indie*

A Groove for a particular Genre is a typical beat that would be used for that genre. Similarly, a Fill for a particular Genre is a drum fill that would be used in music for that genre. A Variation has the same general sound and feel of the main Groove or Fill, but has some small changes, ranging from different hi-hat rates to additions of ghost notes to changes of drums used, etc. The different Variations have key words in their names to identify the changes made in a particular variation, which are listed below:

- *4th, 8th, 16th*, etc.: This represents the note division on which the tempo of the groove is played or felt. This is usually based on the instrument that is keeping the time, such as the hi-hat or ride cymbal.
- *Hat/Ride/Other*: This is the instrument that is keeping the time of the groove, typically a hi-hat or ride cymbal.

- *Closed/Open/Both*: This term is used when a hi-hat is keeping the time, and describes whether the hi-hat is always closed, always open, or uses both closed and open hits. This term will not be used if a ride cymbal or other instrument is keeping the time.
- “Extra”: Sometimes an extra word is added at the end to classify the sound of the groove:
  - *Ghost*: This is used when there are additional ghost notes added to the groove, such as snare or kick ghost hits.
  - *Side*: This term is used if a snare sidestick is used instead of a center hit.
  - *Toms*: When additional toms are included in the groove, this term will appear.
  - *Perc*: If additional percussion sounds are used, which includes extra percussion such as cowbells or hand claps, as well as “rim only” articulations, then this term will be used.
  - *Multi*: If more than one of the above sounds or techniques is used, then the term at the end will be Multi to represent multiple types.

## Groove Controls

- The **TIGHTNESS** knob changes the amount of “groove” in the beat. The center value is the original sounding played beat. When turned all the way to the right, the beat is completely quantized and “machine-like”. As the knob is turned to the left, the beat gets more and more loose until it sounds very “sloppy” when turned all the way to the left. Depending on the type of music, all knob positions can be useful for different styles.
- The **SWING** knob adjusts the amount of swing in the beat. Swing allows for rhythmic shifting of a groove where the first note in a series plays longer than the one that follows. When the knob is all the way to the right, the swing is the most severe. When all the way to the left, a “negative” swing is applied, where the first note in the series is actually shorter than the one that follows. Different time signatures affect the swing in different ways, so it is often best just to try the **SWING** knob to see how it sounds with the selected groove.
- The **GRID** selector allows you to select different quantization timings for the **TIGHTNESS** and **SWING** knobs. For example, selecting  $1/8$  will push the grooves towards or away from the 8th notes of the beat when using the **TIGHTNESS** knob.

- The **VELOCITY** knob changes the range of the velocities in the grooves. At the center position, the groove plays with the same velocities that were recorded with it. As the knob is turned to the right, the range is “compressed” to the high range so that all velocity values increase until they are all at maximum when the knob is all the way to the right. Similarly, when the knob is turned to the left the velocities are “compressed” to the low range until all velocities are the lowest when turning the knob all the way to the left.
- The **TEMPO** selection buttons allow you to immediately change the tempo of the groove or fill to be half the speed or double the speed of the originals. This can be useful when a song is recorded at a high BPM tempo, but the feel of the song is actually half of that speed (or vice versa).

## 4.4 Options Page

The **Options** page is where additional “technical” parameters of a kit are adjusted, such as the MIDI note mapping and velocity ranges. There is also a **RANDOMIZE** section where various sound parameters have random values applied.



Options page Performance View

### 4.4.1 VELOCITY Settings

The **VELOCITY** area at the top allows you to fine-tune the way ABBEY ROAD 50S DRUMMER responds to MIDI input:

- In the **CURVE** section you can select a curve for incoming MIDI note velocities. The default is a linear curve, but many MIDI input devices have different levels of sensitivity, making a convex or concave curve more appropriate. There is also an option to select a constant “fixed” velocity (represented by a horizontal line).

- Utilizing the **RANGE** controls, you can change the lowest and highest velocity values. This is useful for preventing the quietest and/or the loudest sounds from playing, and instead be limited to the specified minimum and maximum. Different MIDI input devices, such as MIDI keyboards and electronic drum kits, will also need their own velocity setting adjustments to match your playing style.

## 4.4.2 MIDI Mapping

The **MIDI MAPPING** area contains all of the controls for changing the mapping layout of the kits. Each articulation can be assigned to one or more MIDI notes, allowing for your own customized mapping. This is very useful for adjusting the mapping to the way that suits you best when playing the drums with a MIDI keyboard, or for adjusting the mapping to a custom electronic drum setup.

To assign the MIDI notes manually by entering or selecting the note in the **NOTE** selector:

1. Select the **INSTRUMENT** and the **ARTICULATION** in the drop-down menus.
2. Click on the checkbox next to the **APPLY CHANGES?** label.

→ The changes will be applied.



You can also click the **SELECT BY MIDI** icon to change to the **NOTE** value by playing the MIDI note, and then following the procedure above to assign the note.

All custom MIDI mappings can be saved and loaded from the mapping preset menu.

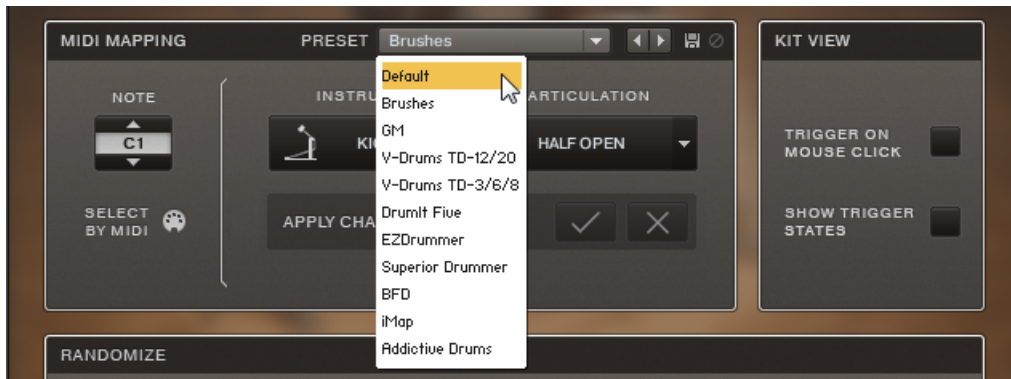
## Mapping Presets

ABBEY ROAD 50S DRUMMER also comes with a selection of mapping presets that are set up to work with popular software and electronic drum setups. These include:

- *Brushes*
- *GM* (General MIDI)
- *V-Drums* (two options)
- *DrumIt Five*
- *EZDrummer*
- *Superior Drummer*

- *BFD*
- *iMap*
- *Addictive Drums*

These mappings can be selected from the **PRESET** drop-down menu in the **MIDI MAPPING** area. If you want to make changes to these mappings, you can always do so and save the mapping preset under a different name.



Mapping presets in the Options tab.



Please keep in mind that every e-drum setup is different, and almost every drum kit has some particularities to it. Therefore the mapping presets will not fully match your e-drum setup without any adjustments. These mapping presets have been included to provide you with the best possible starting point. You can make additional changes to these mappings and save a new preset to fit your e-drum needs.

### 4.4.3 KIT VIEW Settings

The **KIT VIEW** area holds the properties of the **Kit** page:

- **TRIGGER ON MOUSE CLICK:** This option defines if the sound of an instrument is played back when the instrument's image on the **Kit** page is clicked on with the mouse.
- **SHOW TRIGGER STATES:** This option defines whether the drum kit view on the **Kit** page displays a real-time animation when instruments are triggered (played) during song or MIDI groove playback.



It is recommended to deactivate the **SHOW TRIGGER STATES** option when computing power is scarce, e.g. when working on projects with high track counts. Switching off the user interface animations may considerably reduce the CPU load.

#### 4.4.4 RANDOMIZE Settings

The controls in the **RANDOMIZE** area add custom levels of humanization and variation in the sound output. The higher the value of a knob, the higher the range of randomization for the relevant control. The randomized parameters are:

- **VOLUME**: The volume level of the played drum increases or decreases by a random amount with each hit.
- **VELOCITY**: The velocity of the played drum will increase or decrease slightly, which can trigger different samples above or below the one at the original velocity.
- **TIME**: This will add a slight random amount of delay to each hit.
- **PITCH**: The pitch of the played drum will be higher or lower by a slight amount with each hit.
- **TONE**: This will slightly change the frequency curve of each hit. Different drums have different frequency ranges, specific to the sound of each drum.



A good way to add even more subtle variation to the sounds in the kit is to change the randomization parameters just slightly, especially the **PITCH**, **TONE** and **VOLUME** knobs. For all knobs, turning them a maximum of a quarter of the way up will allow the effect to remain subtle. Turning these knobs up to a high value can be used for a more experimental sound.

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## 5 Kit Selection

There are a total of four main instrument NKIs included with ABBEY ROAD 50s DRUMMER:

- **Autumn Kit Full:** This is the full version of the Ebony Kit with all samples and microphones included.
- **Autumn Kit Lite:** This is a version of the Ebony Kit that includes all velocity layers, but has no sound variations for same velocity hits. This kit has a smaller memory footprint as well as a faster loading time than the full kit.
- **Spring Kit Full:** This is the full version of the Ivory Kit with all samples and microphones included.
- **Spring Kit Lite:** This is a version of the Ivory Kit that includes all velocity layers, but has no sound variations for same velocity hits. This kit has a smaller memory footprint as well as a faster loading time than the full kit.



## 5.1 Autumn Kit – Default Mapping

Drum	Articulation	Default Key / MIDI Number
Kick Drum	Dampened	C3 / 60 (D#7 / 111)
	Half Open	C1 / 36 (A#4 / 82)
Snare Drum A, B & C	Center Left Hand	F6 / 101
	Center Right Hand	G6 / 103
	Center Right/Left Alternating *	D1 / 38
	Halfway Left Hand	A6 / 105
	Halfway Right Hand	B6 / 107
	Halfway Right/Left Alternating *	E1 / 40
	Rimshot	D#1 / 39
	Sidestick	C#1 / 37
	Flam	D3 / 62
	Roll***	D#3 / 63
	Wires Off	E3 / 64
	Rim Only	C#3 / 61
	Brush Tap Left Hand	A4 / 81
	Brush Tap Right Hand	B4 / 83
	Brush Dig In	C5 / 84
	Brush Swish	D5 / 86

Drum	Articulation	Default Key / MIDI Number
Hi-hat	Closed Tight Tip Right Hand	D#6 / 99
	Closed Tight Tip Left Hand	C#6 / 97
	Closed Tight Tip Right/Left Alternating *	F#3 / 66
	Closed Tip Right Hand	G#6 / 104
	Closed Tip Left Hand	F#6 / 102
	Closed Tip Right/Left Alternating *	F#1 / 42
	Closed Shank Right Hand	C#7 / 109
	Closed Shank Left Hand	A#6 / 106
	Closed Shank Right/Left Alternating *	G#3 / 68
	Closed Pedal	G#1 / 44
	Open Pedal	A#3 / 70
	Open Quarter	E4 / 76
	Open Half	F4 / 77
	Open Three-Quarters	F#4 / 78
	Open Loose	G4 / 79
	Open Full	G#4 / 80
	Open Controller **	A#1 / 46
	Brush Open	C#5 / 85
	Brush Closed Tip	D#5 / 87
	Brush Half Open	F#5 / 90
Tom 1 (Rack Tom)	Center Right Hand	A7 / 117
	Center Left Hand	G7 / 115
	Center Right/Left Alternating *	B1 / 47
	Rimshot	B3 / 71
	Rim Only	D#4 / 75
	Brush Tap	B5 / 95
	Brush Dig	C6 / 96

Drum	Articulation	Default Key / MIDI Number
Tom 2 (Rack Tom)	Center Right Hand	F7 / 113
	Center Left Hand	E7 / 112
	Center Right/Left Alternating *	A1 / 45
	Rimshot	A3 / 69
	Rim Only	C#4 / 73
	Brush Tap	E5 / 88
	Brush Dig	A5 / 93
Tom 3 (Rack Tom)	Center Right Hand	D7 / 110
	Center Left Hand	C7 / 108
	Center Right/Left Alternating *	F1 / 41 (G1 / 43)
	Rimshot	F3 / 65 (G3 / 67)
	Rim Only	C4 / 72 (D4 / 74)
	Brush Tap	E5 / 88
	Brush Dig	F5 / 89
Cymbal 1 (Crash 1)	Edge	A#2 / 58
	Tip	C2 / 48 (A2 / 57)
	Bell	D2 / 50 (B2 / 59)
	Choke	A#-1 / 22 (C#0 / 25)
	Brush	G#5 / 92
Cymbal 2 (Crash 2)	Edge	G2 / 55
	Tip	F#2 / 54
	Bell	G#2 / 56
	Choke	C0 / 24
	Brush	A#5 / 94

Drum	Articulation	Default Key / MIDI Number
Cymbal 3 (Ride)	Tip	B2 / 59
	Bell	A2 / 57
	Edge	A#2 / 58
	Choke	B-1 / 23
	Brush Tip	B5 / 95
	Brush Sweep	C6 / 96
Kick Shell	Hit	G0 / 31 (G#0 / 32)
Clap	Solo	A0 / 33
	Multi	A#0 / 34
Sticks	Hit	B0 / 35
Triangle	Open	E0 / 26 (F#0 / 30)
	Muted	F0 / 29
Woodblock	Hit	D0 / 26 (D#0 / 37)

## 5.2 Autumn Kit – Brushes Mapping

Drum	Articulation	Default Key / MIDI Number
Kick Drum	Dampened	C3 / 60 (D#7 / 111)
	Half Open	C1 / 36 (A#4 / 82)
Snare Drum A, B & C	Center Left Hand	F6 / 101
	Center Right Hand	G6 / 103
	Center Right/Left Alternating *	A4 / 81
	Halfway Left Hand	A6 / 105
	Halfway Right Hand	B6 / 107
	Halfway Right/Left Alternating *	B4 / 83
	Rimshot	C5 / 84
	Sidestick	C#1 / 37
	Flam	D5 / 86
	Roll***	D#3 / 63
	Wires Off	E3 / 64
	Rim Only	C#3 / 61
	Brush Tap Left Hand	D1 / 38
	Brush Tap Right Hand	E1 / 40
	Brush Dig In	D#1 / 39
	Brush Swish	C#1 / 37

Drum	Articulation	Default Key / MIDI Number
Hi-hat	Closed Tight Tip Right Hand	D#6 / 99
	Closed Tight Tip Left Hand	C#6 / 97
	Closed Tight Tip Right/Left Alternating *	F#3 / 66
	Closed Tip Right Hand	G#6 / 104
	Closed Tip Left Hand	F#6 / 102
	Closed Tip Right/Left Alternating *	F#1 / 42
	Closed Shank Right Hand	C#7 / 109
	Closed Shank Left Hand	A#6 / 106
	Closed Shank Right/Left Alternating *	G#3 / 68
	Closed Pedal	G#1 / 44
	Open Pedal	A#3 / 70
	Open Quarter	E4 / 76
	Open Half	F4 / 77
	Open Three-Quarters	F#4 / 78
	Open Loose	G4 / 79
	Open Full	G#4 / 80
	Open Controller **	A#1 / 46
	Brush Open	D6 / 98
	Brush Closed Tip	E6 / 100
	Brush Half Open	A#1 / 46
Tom 1 (Rack Tom)	Center Right Hand	E7 / 112
	Center Left Hand	F7 / 113
	Center Right/Left Alternating *	G5 / 91 (A5 / 93)
	Rimshot	A3 / 69 (B3 / 71)
	Rim Only	C#4 / 73 (D#4 / 75)
	Brush Tap	C2 / 48
	Brush Dig	D2 / 50

Drum	Articulation	Default Key / MIDI Number
Tom 2 (Rack Tom)	Center Right Hand	D7 / 110
	Center Left Hand	C7 / 108
	Center Right/Left Alternating *	E5 / 88 (F5 / 89)
	Rimshot	G3 / 67
	Rim Only	D4 / 74
	Brush Tap	A1 / 45
	Brush Dig	B1 / 47
Tom 3 (Floor Tom)	Center Right Hand	D7 / 110
	Center Left Hand	C7 / 108
	Center Right/Left Alternating *	E5 / 88 (F5 / 89)
	Rimshot	F3 / 65
	Rim Only	C4 / 72
	Brush Tap	F1 / 41
	Brush Dig	G1 / 43
Cymbal 1 (Crash 1)	Edge	A#2 / 58
	Tip	C2 / 48 (A2 / 57)
	Bell	D2 / 50 (B2 / 59)
	Choke	A#-1 / 22 (C#0 / 25)
	Brush	C#2 / 49
Cymbal 2 (Crash 2)	Edge	G2 / 55
	Tip	F#2 / 54
	Bell	G#2 / 56
	Choke	C0 / 24
	Brush	D#2 / 51

Drum	Articulation	Default Key / MIDI Number
Cymbal 3 (Ride)	Tip	B2 / 59
	Bell	A2 / 57
	Edge	A#2 / 58
	Choke	B-1 / 23
	Brush Tip	E2 / 52
	Brush Sweep	F2 / 53
Kick Shell	Hit	G0 / 31 (G#0 / 32)
Clap	Solo	A0 / 33
	Multi	A#0 / 34
Sticks	Hit	B0 / 35
Triangle	Open	E0 / 26 (F#0 / 30)
	Muted	F0 / 29
Woodblock	Hit	D0 / 26 (D#0 / 37)



## 5.3 Spring Kit – Default Mapping

Drum	Articulation	Default Key / MIDI Number
Kick Drum	Dampened	C1 / 36 (A#4 / 82)
	Open	C3 / 60 (D#7 / 111)
Snare Drum A, B & C	Center Left Hand	F6 / 101
	Center Right Hand	G6 / 103
	Center Right/Left Alternating *	D1 / 38
	Halfway Left Hand	A6 / 105
	Halfway Right Hand	B6 / 107
	Halfway Right/Left Alternating *	E1 / 40
	Rimshot	D#1 / 39
	Sidestick	C#1 / 37
	Flam	D3 / 62
	Roll***	D#3 / 63
	Wires Off	E3 / 64
	Rim Only	C#3 / 61
	Brush Tap Left Hand	A4 / 81
	Brush Tap Right Hand	B4 / 83
	Brush Dig In	C5 / 84
	Brush Swish	D5 / 86

Drum	Articulation	Default Key / MIDI Number
Hi-hat	Closed Tight Tip Right Hand	D#6 / 99
	Closed Tight Tip Left Hand	C#6 / 97
	Closed Tight Tip Right/Left Alternating *	F#3 / 66
	Closed Tip Right Hand	G#6 / 104
	Closed Tip Left Hand	F#6 / 102
	Closed Tip Right/Left Alternating *	F#1 / 42
	Closed Shank Right Hand	C#7 / 109
	Closed Shank Left Hand	A#6 / 106
	Closed Shank Right/Left Alternating *	G#3 / 68
	Closed Pedal	G#1 / 44
	Open Pedal	A#3 / 70
	Open Quarter	E4 / 76
	Open Half	F4 / 77
	Open Three-Quarters	F#4 / 78
	Open Loose	G4 / 79
	Open Full	G#4 / 80
	Open Controller **	A#1 / 46
	Brush Closed Bell	C#5 / 85
	Brush Closed Tip	D#5 / 87
	Brush Open	F#5 / 90
Tom 1 (Rack Tom)	Center Right Hand	E7 / 112
	Center Left Hand	F7 / 113
	Center Right/Left Alternating *	A1 / 45 (B1 / 47)
	Rimshot	A3 / 69 (B3 / 71)
	Rim Only	C#4 / 73 (D#4 / 75)
	Brush Tap	G5 / 91
	Brush Dig	A5 / 93

Drum	Articulation	Default Key / MIDI Number
Tom 2 (Floor Tom)	Center Right Hand	D7 / 110
	Center Left Hand	C7 / 108
	Center Right/Left Alternating *	F1 / 41 (G1 / 43)
	Rimshot	F3 / 65 (G3 / 67)
	Rim Only	C4 / 72 (C#4 / 73)
	Brush Tap	E5 / 88
	Brush Dig	F5 / 89
Cymbal 1 (Crash 1)	Edge	C#2 / 49 (A#2 / 58)
	Tip	C2 / 48 (A2 / 57)
	Bell	D2 / 50 (B2 / 59)
	Choke	A#-1 / 22 (C#0 / 25)
	Brush	G#5 / 92
Cymbal 2 (Crash 2)	Edge	G2 / 55
	Tip	F#2 / 54
	Bell	G#2 / 56
	Choke	C0 / 24
	Brush	A#5 / 94
Cymbal 3 (Ride)	Tip	D#2 / 51
	Bell	F2 / 53
	Edge	E2 / 52
	Choke	B-1 / 23
	Brush Tip	B5 / 95
	Brush Sweep	C6 / 96
Tambourine	Tap	G0 / 31
	Shake	G#0 / 32
Claps	Solo	A0 / 33
	Multi	A#0 / 34

Drum	Articulation	Default Key / MIDI Number
Sticks	Hit	B0 / 35
Cowbell	Hit	F0 / 29 (F#0 / 30)
Bongo	Low	D0 / 26
	High Muted	D#0 / 27
	High Open	E0 / 28

## 5.4 Spring Kit – Brushes Mapping

Drum	Articulation	Default Key / MIDI Number
Kick Drum	Dampened	C3 / 60 (D#7 / 111)
	Half Open	C1 / 36 (A#4 / 82)
Snare Drum A, B & C	Center Left Hand	F6 / 101
	Center Right Hand	G6 / 103
	Center Right/Left Alternating *	A4 / 81
	Halfway Left Hand	A6 / 105
	Halfway Right Hand	B6 / 107
	Halfway Right/Left Alternating *	B4 / 83
	Rimshot	C5 / 84
	Sidestick	C#1 / 37
	Flam	D5 / 86
	Roll***	D#3 / 63
	Wires Off	E3 / 64
	Rim Only	C#3 / 61
	Brush Tap Left Hand	D1 / 38
	Brush Tap Right Hand	E1 / 40
	Brush Dig In	D#1 / 39
	Brush Swish	C#1 / 37

Drum	Articulation	Default Key / MIDI Number
Hi-hat	Closed Tight Tip Right Hand	D#6 / 99
	Closed Tight Tip Left Hand	C#6 / 97
	Closed Tight Tip Right/Left Alternating *	F#3 / 66
	Closed Tip Right Hand	G#6 / 104
	Closed Tip Left Hand	F#6 / 102
	Closed Tip Right/Left Alternating *	F#1 / 42
	Closed Shank Right Hand	C#7 / 109
	Closed Shank Left Hand	A#6 / 106
	Closed Shank Right/Left Alternating *	G#3 / 68
	Closed Pedal	G#1 / 44
	Open Pedal	A#3 / 70
	Open Quarter	E4 / 76
	Open Half	F4 / 77
	Open Three-Quarters	F#4 / 78
	Open Loose	G4 / 79
	Open Full	G#4 / 80
	Open Controller **	A#1 / 46
	Brush Open	D6 / 98
	Brush Closed Tip	E6 / 100
	Brush Half Open	A#1 / 46
Tom 1 (Rack Tom)	Center Right Hand	E7 / 112
	Center Left Hand	F7 / 113
	Center Right/Left Alternating *	G5 / 91 (A5 / 93)
	Rimshot	A3 / 69 (B3 / 71)
	Rim Only	C#4 / 73 (D#4 / 75)
	Brush Tap	C2 / 48 (G1 / 43)
	Brush Dig	D2 / 50

Drum	Articulation	Default Key / MIDI Number
Tom 2 (Floor Tom)	Center Right Hand	D7 / 110
	Center Left Hand	C7 / 108
	Center Right/Left Alternating *	E5 / 88 (F5 / 89)
	Rimshot	F3 / 65 (G3 / 67)
	Rim Only	C4 / 72 (D4 / 74)
	Brush Tap	A1 / 45 (F1 / 41)
	Brush Dig	B1 / 47
Cymbal 1 (Crash 1)	Edge	A#2 / 58
	Tip	C2 / 48 (A2 / 57)
	Bell	D2 / 50 (B2 / 59)
	Choke	A#-1 / 22 (C#0 / 25)
	Brush	C#2 / 49
Cymbal 2 (Crash 2)	Edge	G2 / 55
	Tip	F#2 / 54
	Bell	G#2 / 56
	Choke	C0 / 24
	Brush	D#2 / 51
Cymbal 3 (Ride)	Tip	B2 / 59
	Bell	A2 / 57
	Edge	A#2 / 58
	Choke	B-1 / 23
	Brush Tip	E2 / 52
	Brush Sweep	F2 / 53
Tambourine	Tap	G0 / 31
	Shake	G#0 / 32
Claps	Solo	A0 / 33
	Multi	A#0 / 34

Drum	Articulation	Default Key / MIDI Number
Sticks	Hit	B0 / 35
Cowbell	Hit	F0 / 29 (F#0 / 30)
Bongo	Low	D0 / 26
	High Muted	D#0 / 27
	High Open	E0 / 28

\* There is a separate note assignment that alternates between the left and right hand samples of the center snare, center tom, and closed hi-hat articulations when playing faster than a certain speed. This adds a realistic sound to faster playing, as a drummer would also switch to using both hands at fast speeds.

\*\* There is a separate note assignment for the open hi-hat that controls the amount of hi-hat openness depending on the position of the Modwheel controller (CC1) or a hi-hat foot controller (CC4). At the 0 position of the controller, the open hi-hat control key plays the fully open hi-hat. As the controller sends higher values, playing the open hi-hat control key will trigger hi-hat samples that gradually become more closed.

\*\*\* There is a separate note assignment for the snare roll (Note D#3 / MIDI Number 63) that controls the volume of the snare roll depending on the position of the Pitch controller (CC0). If you have a MIDI device with a Pitch bend lever and move it to the left position the snare roll will be softer, if you move it to the right the snare roll will be louder when the articulation is played. Alternatively, if you have a Pitch bend wheel, moving it downwards into negative values will make the snare roll softer and pushing it up into positive values will make the snare roll louder when the articulation is played.



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## 6 Credits

**Product Design:** Dinos Vallianatos, Frank Elting

**Sound Design:** Thanos Kazakos, Julian Laping, Sebastian Müller

**Sample Editing:** e-Instruments

**Graphic Design:** Gösta Wellmer, Florian Poschlod, Efflam Le Bivic

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**QA for Instruments powered by KONTAKT:** Bymski, Achim Siebert

**MIDI Grooves:** Simon Baumann, Ludger Kleff, Julian Laping

**Mixer Preset Design:** Sebastian Müller, Chuck Zwicky, Peter Funke

**Session Leader:** Julian Laping

**Executive Producer:** Mirek Stiles

**Recording Engineer:** Chris Bolster

**Assistant engineer:** Toby Hulbert, Matthew Mysko

**Drummer:** Paul Clarvis

**Drum Technician:** Dave Payne

**Documentation:** Mirek Stiles, Paul Maurer

**All Drums Provided by:** Paul Clarvis